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Claims

1. Pressure regulator with partial volumes for regulating the operating pressure of fluids, in particular adhesives, at the inlet of a consuming device, the first partial volume (14) being connectable to a fluid source and the second partial volume (24) being connectable to the fluid inlet of the consuming device, characterized in that the second partial volume has a cylindrical section (24a) of variable size, a connecting channel (22) connecting the first and the second partial volumes, a valve disposed in the first partial volume for opening and closing the connecting channel, said valve having an insert (23) and a movable sealing piston (32), the front end of which (sealing area 40) forms a sealing body (34) for closing the connecting channel and the rear end of which is sealed against the first partial volume, that a working piston (54) is disposed in the cylindrical section (24a) for changing the volume thereof, with a front end (59) facing the cylindrical section and the sealing piston, and with a piston rod (56) for moving the sealing piston, said piston rod engaging the front end of the sealing piston and forming an endstop for same, that the rear end of the sealing piston and the front end of the working piston are exposed to the pressure of the fluid in the second partial volume and that a movable adjuster piston (92) is provided to which compressed air can be applied and which is coupled to the endstop that determines the extent to which the valve opens between its closed and its open position.
2. Pressure regulator according to claim 1, characterized in that the sealing piston (32) is biased in the closed position by a tensioning means, in particular by a spring (48).

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3. Pressure regulator according to one of the preceding claims, characterized in that the adjuster piston (92) is biased in the closed position by a tensioning means, in particular by a spring (112).
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4. Pressure regulator according to one of the preceding claims, characterized in that, in order to transfer the adjusting force from the adjuster piston (92) to the sealing piston (32), an adjuster piston rod (100) fixedly attached to the adjuster piston and a piston rod (56) separate therefrom and fixedly attached to the working piston (54) are provided, that both piston rods are displaceable along a common axis (Z-Z) and that the piston rod (56) passes through the working piston (54), projects beyond the working piston (54) at the end facing away from the adjuster piston rod (100), where it forms the endstop for the sealing body.
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5. Pressure regulator according to claim 4, characterized in that the end of the piston (56) facing away from the adjuster piston (100) passes through the connecting channel (22).
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6. Pressure regulator according to one of the preceding claims, characterized in that a display means (indicator screw 57) is disposed on the piston (56) and is positioned in such a way that it can be read from outer side of the pressure regulator.
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7. Pressure regulator according to one of the preceding claims, characterized in that the effective piston areas in the pneumatic adjuster portion (90) of the pressure regulator and in the hydraulic regulator portion (12) of the pressure regulator are in a predetermined ratio, in particular 1:3.
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